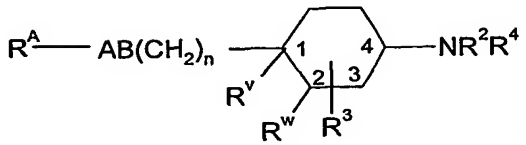
Claims

1. A compound of formula (I) or a pharmaceutically acceptable derivative thereof:

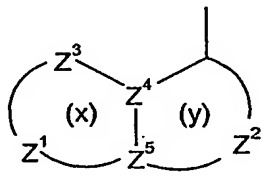


(I)

wherein:

R^V and R^W are hydrogen or R^V and R^W together are a bond;

R^A is an optionally substituted bicyclic carbocyclic or heterocyclic ring system of structure:



containing 0-3 heteroatoms in each ring in which:

at least one of rings (x) and (y) is aromatic;

one of Z^4 and Z^5 is C or N and the other is C;

Z^3 is N, NR^{13}, O, $S(O)_X$, CO, CR^1 or CR^1R^{1a};

Z^1 and Z^2 are independantly a 2 or 3 atom linker group each atom of which is independently selected from N, NR^{13}, O, $S(O)_X$, CO, CR^1 and CR^1R^{1a};

such that each ring is independently substituted with 0-3 groups R^1 and/or R^{1a};

R^1 and R^{1a} are independently selected from hydrogen; hydroxy; (C_{1-6}) alkoxy optionally substituted by (C_{1-6})alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups, CONH2, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{1-6})alkoxy-substituted (C_{1-6})alkyl; hydroxy (C_{1-6})alkyl; halogen; (C_{1-6})alkyl; (C_{1-6})alkylthio; trifluromethyl; trifluoromethoxy; cyano; carboxy; nitro; azido; acyl; acyloxy; acylthio; (C_{1-6})alkylsulphonyl; (C_{1-6})alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups, or when Z^3 and the adjacent atom are CR^1 and CR^{1a}, R^1 and R^{1a} may together represent (C_{1-2})alkylenedioxy,

provided that R^1 and R^{1a}, on the same carbon atom are not both optionally substituted hydroxy or amino;

provided that

(i) when R^A is optionally substituted quinolin-4-yl:

it is unsubstituted in the 6-position; or

it is substituted by at least one hydroxy (C_{1-6})alkyl, cyano or carboxy group at the 2-, 5-, 6-, 7- or 8-position; or

it is substituted by at least one trifluoromethoxy group; or

R^3 is halogen;

(ii) when R^A is optionally substituted quinazolin-4-yl, cinnolin-4-yl, 1,5-naphthyridin-4-yl, 1,7-naphthyridin-4-yl or 1,8-naphthyridin-4-yl:

it is substituted by at least one hydroxy (C_{1-6})alkyl, cyano or carboxy group at the 2-, 5-, 6-, 7- or 8-position as available; or

it is substituted by at least one trifluoromethoxy group; or

R^3 is halogen;

R^2 is hydrogen, or (C_{1-4})alkyl or (C_{2-4})alkenyl optionally substituted with 1 to 3 groups selected from:

amino optionally substituted by one or two (C_{1-4})alkyl groups; carboxy; (C_{1-4})alkoxycarbonyl; (C_{1-4})alkylcarbonyl; (C_{2-4})alkenyloxycarbonyl; (C_{2-4})alkenylcarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C_{1-4})alkyl, hydroxy(C_{1-4})alkyl, aminocarbonyl(C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{1-4})alkylsulphonyl, trifluoromethylsulphonyl, (C_{2-4})alkenylsulphonyl, (C_{1-4})alkoxycarbonyl, (C_{1-4})alkylcarbonyl, (C_{2-4})alkenyloxycarbonyl or (C_{2-4})alkenylcarbonyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R^{10}; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R^{10}; 5-oxo-1,2,4-oxadiazol-3-yl; halogen; (C_{1-4})alkylthio; trifluoromethyl; hydroxy optionally substituted by (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{1-4})alkoxycarbonyl, (C_{1-4})alkylcarbonyl, (C_{2-4})alkenyloxycarbonyl, (C_{2-4})alkenylcarbonyl; oxo; (C_{1-4})alkylsulphonyl; (C_{2-4})alkenylsulphonyl; or (C_{1-4})aminosulphonyl wherein the amino group is optionally substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl;

R^3 is hydrogen; or

when R^V and R^W are a bond, R^3 is in the 2-, 3- or 4- position and when R^V and R^W are not a bond, R^3 is in the 1-, 2-, 3- or 4-position and R^3 is:

carboxy; (C_{1-6})alkoxycarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C_{1-6})alkyl, hydroxy(C_{1-6})alkyl, aminocarbonyl(C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylsulphonyl, trifluoromethylsulphonyl, (C_{2-6})alkenylsulphonyl, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl or (C_{2-6})alkenylcarbonyl and optionally further substituted by (C_{1-6})alkyl, hydroxy(C_{1-6})alkyl, aminocarbonyl(C_{1-6})alkyl or (C_{2-6})alkenyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R^{10}; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R^{10}; or 5-oxo-1,2,4-oxadiazol-3-yl; or

(C_{1-4})alkyl or ethenyl optionally substituted with any of the groups listed above for R^3 and/or 0 to 2 groups R^{12} independently selected from:

halogen; (C_{1-6})alkylthio; trifluoromethyl; (C_{1-6})alkoxycarbonyl; (C_{1-6})alkylcarbonyl; (C_{2-6})alkenyloxycarbonyl; (C_{2-6})alkenylcarbonyl; hydroxy optionally substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylcarbonyl or (C_{2-6})alkenylcarbonyl; amino optionally mono- or disubstituted by (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl, (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylsulphonyl, (C_{2-6})alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl; aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl, hydroxy(C_{1-6})alkyl, aminocarbonyl(C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl or (C_{2-6})alkenylcarbonyl and optionally further substituted by (C_{1-6})alkyl, hydroxy(C_{1-6})alkyl, aminocarbonyl(C_{1-6})alkyl or (C_{2-6})alkenyl; oxo; (C_{1-6})alkylsulphonyl; (C_{2-6})alkenylsulphonyl; or (C_{1-6})aminosulphonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl; or

hydroxy optionally substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylcarbonyl or (C_{2-6})alkenylcarbonyl; or

amino optionally mono- or disubstituted by (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl, (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylsulphonyl, (C_{2-6})alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl; or

halogen;

provided that when R^3 is in the 4- position it is not optionally substituted hydroxyl or amino or halogen;

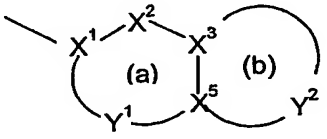
in addition when R^3 is disubstituted with a hydroxy or amino containing substituent and a carboxy containing substituent these may optionally together form a cyclic ester or amide linkage, respectively;

R^{10} is selected from (C_{1-4})alkyl and (C_{2-4})alkenyl either of which may be optionally substituted by a group R^{12} as defined above; carboxy; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{1-6})alkylsulphonyl, trifluoromethylsulphonyl, (C_{2-6})alkenylsulphonyl, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl or (C_{2-6})alkenylcarbonyl and optionally further substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl; (C_{1-6})alkylsulphonyl; trifluoromethylsulphonyl; (C_{2-6})alkenylsulphonyl; (C_{1-6})alkoxycarbonyl; (C_{1-6})alkylcarbonyl; (C_{2-6})alkenyloxycarbonyl; and (C_{2-6})alkenylcarbonyl;

R^4 is a group $-CH_2-R^5{}_1$ in which $R^5{}_1$ is selected from:

(C_{4-8})alkyl; hydroxy(C_{4-8})alkyl; (C_{1-4})alkoxy(C_{4-8})alkyl; (C_{1-4})alkanoyloxy(C_{4-8})alkyl; (C_{3-8})cycloalkyl(C_{4-8})alkyl; hydroxy-, (C_{1-6})alkoxy- or (C_{1-6})alkanoyloxy-(C_{3-8})cycloalkyl(C_{4-8})alkyl; cyano(C_{4-8})alkyl; (C_{4-8})alkenyl; (C_{4-8})alkynyl; tetrahydrofuryl; mono- or di-(C_{1-6})alkylamino(C_{4-8})alkyl; acylamino(C_{4-8})alkyl; (C_{1-6})alkyl- or acyl-aminocarbonyl(C_{4-8})alkyl; mono- or di- (C_{1-6})alkylamino(hydroxy) (C_{4-8})alkyl; or

R^4 is a group $-U-R^5{}_2$ where $R^5{}_2$ is an optionally substituted bicyclic carbocyclic or heterocyclic ring system (A):



(A)

containing up to four heteroatoms in each ring in which

at least one of rings (a) and (b) is aromatic;

X^1 is C or N when part of an aromatic ring or CR^{14} when part of a non aromatic ring;

X^2 is N, NR^{13}, O, $S(O)_x$, CO or CR^{14} when part of an aromatic or non-aromatic ring or may in addition be $CR^{14}R^{15}$ when part of a non aromatic ring;

X^3 and X^5 are independently N or C;

Y^1 is a 0 to 4 atom linker group each atom of which is independently selected from N, NR^{13}, O, $S(O)_x$, CO and CR^{14} when part of an aromatic or non-aromatic ring or may additionally be $CR^{14}R^{15}$ when part of a non aromatic ring,

Y^2 is a 2 to 6 atom linker group, each atom of Y^2 being independently selected from N, NR^{13}, O, $S(O)_x$, CO and CR^{14} when part of an aromatic or non-aromatic ring or may additionally be $CR^{14}R^{15}$ when part of a non aromatic ring;

each of R^{14} and R^{15} is independently selected from: H; (C_{1-4})alkylthio; halo; carboxy(C_{1-4})alkyl; halo(C_{1-4})alkoxy; halo(C_{1-4})alkyl; (C_{1-4})alkyl; (C_{2-4})alkenyl; (C_{1-4})alkoxycarbonyl; formyl; (C_{1-4})alkylcarbonyl; (C_{2-4})alkenyloxycarbonyl; (C_{2-4})alkenylcarbonyl; (C_{1-4})alkylcarbonyloxy; (C_{1-4})alkoxycarbonyl(C_{1-4})alkyl; hydroxy; hydroxy(C_{1-4})alkyl; mercapto(C_{1-4})alkyl; (C_{1-4})alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl optionally substituted as for corresponding substituents in R^3; (C_{1-4})alkylsulphonyl; (C_{2-4})alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl; aryl; aryl(C_{1-4})alkyl; aryl(C_{1-4})alkoxy;

each R^{13} is independently H; trifluoromethyl; (C_{1-4})alkyl optionally substituted by hydroxy, carboxy, (C_{1-6})alkoxycarbonyl, (C_{1-6})alkoxy, (C_{1-6})alkylthio, halo or trifluoromethyl; (C_{2-4})alkenyl; aryl; aryl (C_{1-4})alkyl; arylcarbonyl; heteroarylcarbonyl; (C_{1-4})alkoxycarbonyl; (C_{1-4})alkylcarbonyl; formyl; (C_{1-6})alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-4})alkoxycarbonyl, (C_{1-4})alkylcarbonyl, (C_{2-4})alkenyloxycarbonyl, (C_{2-4})alkenylcarbonyl, (C_{1-4})alkyl or (C_{2-4})alkenyl and optionally further substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl;

each x is independently 0, 1 or 2;

U is CO, SO_2 or CH_2; or

R^4 is a group $-X^{1a}-X^{2a}-X^{3a}-X^{4a}$ in which:

X^{1a} is CH_2, CO or SO_2;

X^{2a} is $CR^{14a}R^{15a}$;

X^{3a} is NR^{13a}, O, S, SO_2 or $CR^{14a}R^{15a}$; wherein:

each of R^{14a} and R^{15a} is independently selected from the groups listed above for R^{14} and R^{15}, provided that R^{14a} and R^{15a} on the same carbon atom are not both selected from optionally substituted hydroxy and optionally substituted amino; or

R^{14a} and R^{15a} together represent oxo;

R^{13a} is hydrogen; trifluoromethyl; (C_{1-6})alkyl; (C_{2-6})alkenyl; (C_{1-6})alkoxycarbonyl; (C_{1-6})alkylcarbonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl, (C_{1-6})alkyl or (C_{2-6})alkenyl and optionally further substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl; or

two R^{14a} groups or an R^{13a} and an R^{14a} group on adjacent atoms together represent a bond and the remaining R^{13a}, R^{14a} and R^{15a} groups are as above defined; or

two R^{14a} groups and two R^{15a} groups on adjacent atoms together represent bonds such that X^{2a} and X^{3a} is triple bonded;

X^{4a} is phenyl or C or N linked monocyclic aromatic 5- or 6-membered heterocycle containing up to four heteroatoms selected from O, S and N and: optionally C-substituted by up to three groups selected from (C_{1-4})alkylthio; halo; carboxy(C_{1-4})alkyl; halo(C_{1-4})alkoxy; halo(C_{1-4})alkyl; (C_{1-4})alkyl; (C_{2-4})alkenyl; (C_{1-4})alkoxycarbonyl; formyl; (C_{1-4})alkylcarbonyl; (C_{2-4})alkenyloxycarbonyl; (C_{2-4})alkenylcarbonyl; (C_{1-4})alkylcarbonyloxy; (C_{1-4})alkoxycarbonyl(C_{1-4})alkyl; hydroxy; hydroxy(C_{1-4})alkyl; mercapto(C_{1-4})alkyl; (C_{1-4})alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl optionally substituted as for corresponding substituents in R^3; (C_{1-4})alkylsulphonyl; (C_{2-4})alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl; aryl, aryl(C_{1-4})alkyl or aryl(C_{1-4})alkoxy; and

optionally N substituted by trifluoromethyl; (C_{1-4})alkyl optionally substituted by hydroxy, (C_{1-6})alkoxy, (C_{1-6})alkylthio, halo or trifluoromethyl; (C_{2-4})alkenyl; aryl; aryl(C_{1-4})alkyl; (C_{1-4})alkoxycarbonyl; (C_{1-4})alkylcarbonyl; formyl; (C_{1-6})alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-4})alkoxycarbonyl, (C_{1-4})alkylcarbonyl, (C_{2-4})alkenyloxycarbonyl, (C_{2-4})alkenylcarbonyl, (C_{1-4})alkyl or (C_{2-4})alkenyl and optionally further substituted by (C_{1-4})alkyl or (C_{2-4})alkenyl;

n is 0 or 1 and AB is $NR^{11}CO$, $CONR^{11}$, $CO\text{-}CR^8R^9$, $CR^6R^7\text{-}CO$, $O\text{-}CR^8R^9$, $CR^6R^7\text{-}O$, $NHR^{11}\text{-}CR^8R^9$, $CR^6R^7\text{-}NHR^{11}$, $NR^{11}SO_2$, $CR^6R^7\text{-}SO_2$ or $CR^6R^7\text{-}CR^8R^9$,
provided that when R^V and R^W are a bond and n=0, B is not NR^{11}, O or SO_2,
or n is 0 and AB is NH-CO-NH or NH-CO-O and R^V/R^W are not a bond;
or n is 0 and AB is $CR^6R^7SO_2NR^2$, $CR^6R^7CONR^2$ or $CR^6R^7CH_2NR^2$ and R^V/R^W are not a bond;
provided that R^6 and R^7, and R^8 and R^9 are not both optionally substituted hydroxy or amino;
and wherein:

each of R^6, R^7 , R^8 and R^9 is independently selected from: H; (C_{1-6})alkoxy; (C_{1-6})alkylthio; halo; trifluoromethyl; azido; (C_{1-6})alkyl; (C_{2-6})alkenyl; (C_{1-6})alkoxycarbonyl; (C_{1-6})alkylcarbonyl; (C_{2-6})alkenyloxycarbonyl; (C_{2-6})alkenylcarbonyl; hydroxy, amino or aminocarbonyl optionally substituted as for corresponding substituents in R^3; (C_{1-6})alkylsulphonyl; (C_{2-6})alkenylsulphonyl; or (C_{1-6})aminosulphonyl wherein the amino group is optionally substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl;
or R^6 and R^8 together represent a bond and R^7 and R^9 are as above defined;

and each R^{11} is independently H; trifluoromethyl; (C_{1-6})alkyl; (C_{2-6})alkenyl; (C_{1-6})alkoxycarbonyl; (C_{1-6})alkylcarbonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C_{1-6})alkoxycarbonyl, (C_{1-6})alkylcarbonyl, (C_{2-6})alkenyloxycarbonyl, (C_{2-6})alkenylcarbonyl, (C_{1-6})alkyl or (C_{2-6})alkenyl and optionally further substituted by (C_{1-6})alkyl or (C_{2-6})alkenyl;

or where one of R^3 and R^6, R^7, R^8 or R^9 contains a carboxy group and the other contains a hydroxy or amino group they may together form a cyclic ester or amide linkage or where R^3 contains a carboxy group and A or B is NH they may be condensed to form a cyclic amide.

2. A compound according to claim 1 wherein R^A is optionally substituted isoquinolin-5-yl, quinolin-8-yl, thieno[3,2-b]pyridin-7-yl, 2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-8-yl, quinoxalin-5-yl, isoquinolin-8-yl, [1,6]-naphthyridin-4-yl, 1,2,3,4-tetrahydroquinoxalin-5-yl or 1,2-dihydroisoquinoline-8-yl.

3. A compound according to any preceding claim wherein R^1 is hydrogen, methoxy, methyl, cyano or halogen and R^{1a} is H.

4. A compound according to any preceding claim wherein R^2 is hydrogen.

5. A compound according to any preceding claim wherein R^3 is hydrogen, fluoro or hydroxy substituted in the 1-or 3-position.

6. A compound according to any preceding claim wherein n is 0 and either A and B are both CH_2, A is CHOH or CH_2 and B is CH_2 or A is NH and B is CO.

7. A compound according to any preceding claim wherein R^4 is $-U-R^5{}_2$, the group –U– is $-CH_2-$, and $R^5{}_2$ is an aromatic heterocyclic ring (A) having 8-11 ring atoms including 2-4 heteroatoms of which at least one is N or NR^{13} in which Y^2 contains 2-3 heteroatoms, one of which is S and 1-2 are N, with one N bonded to X^3, or the heterocyclic ring (A) has ring (a) aromatic selected from optionally substituted benzo and pyrido and ring (b) non-aromatic and Y^2 has 3-5 atoms including a heteroatom bonded to X^5 selected from O, S or NR^{13}, where R^{13} is other than hydrogen, and NHCO bonded via N to X^3, or O bonded to X^3.

8. A compound according to any of claims 1 to 6 wherein $R^5{}_2$ is selected from:3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-yl
3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl
7-chloro-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl
7-fluoro-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl
2,3-dihydro-[1,4]dioxino[2,3-c]pyridin-7-yl.

9. A compound selected from:
1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid thieno[3,2-b]pyridin-7-ylamide
1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-8-yl)-amide
trans-4-[(3-Oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid quinolin-4-ylamide
trans-4-[(3-Oxo-3,4-dihydro-2H-benzo[1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid isoquinolin-5-ylamide
1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide
4-[(3,4-Dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-1-hydroxy-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide
6-({4-Hydroxy-4-[2-(2-methoxy-quinolin-8-yl)-ethyl]-cyclohexylamino}-methyl)-4H-pyrido[3,2-b][1,4]oxazin-3-one
6-({4-Hydroxy-4-[2-(2-methoxy-quinolin-8-yl)-ethyl]-cyclohexylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
(1R,3S,4R)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide 1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide 1-Hydroxy-*t*-4-[(3-oxo-3,4-

dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide(1S,3R,4S)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide

(1S,3R,4S)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide

(1R,3R,4R)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide

(1R,3R,4R)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide

(1R,3S,4R)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide 1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide

1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide

(1R,3R,4R)-3-Hydroxy-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide

7-({*r*-4-Hydroxy-4-[2-(2-methoxy-quinolin-8-yl)-ethyl]-*c*-cyclohexylamino}-methyl)-1H-pyrido[2,3-b][1,4]thiazin-2-one

1-Hydroxy-t-4-[(2-oxo-2,3-dihydro-1H-pyrido[3,4-b][1,4]oxazin-7-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide

t-4-[(7-Fluoro-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-1-hydroxy-*r*-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide

t-4-[(7-Chloro-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-1-hydroxy-*r*-cyclohexanecarboxylic acid (2-methoxy-quinolin-8-yl)-amide

1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (3-methyl-quinoxalin-5-yl)-amide

1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-r-cyclohexanecarboxylic acid (2-methyl-1-oxo-1,2-dihydro-isoquinolin-8-yl)-amide

1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-r-cyclohexanecarboxylic acid (1-methoxy-isoquinolin-8-yl)-amide

1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-r-cyclohexanecarboxylic acid (5-methoxy-quinolin-4-yl)-amide

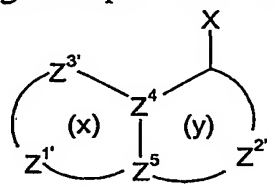
1-Hydroxy-t-4-[(3-oxo-3,4-dihydro-2H -pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-r-cyclohexanecarboxylic acid [1,6]naphthyridin-4-ylamide
1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-r-cyclohexanecarboxylic acid (2-methyl-quinoxalin-5-yl)-amide
(1R,3S,4R)-3-Fluoro-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b]][1,4]oxazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (6-methoxy-[1,5]naphthyridin-4-yl)-amide
(1R,3S,4R)-3-Fluoro-4-[(7-fluoro-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-cyclohexanecarboxylic acid (6-methoxy-[1,5]naphthyridin-4-yl)-amide
1-Hydroxy-t-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-*c*-cyclohexanecarboxylic acid (3-methyl-1,2,3,4-tetrahydro-quinoxalin-5-yl)-amide 1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2Hpyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (3-methoxy-quinoxalin-5-yl)-amide t-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-1-hydroxy-*c*-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide t-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide (1R,3S,4R)-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-3-hydroxy-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide
t-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-1-hydroxy-*r*-cyclohexanecarboxylic acid (2-cyano-quinolin-8-yl)-amide
(1R,3R,4R)-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-3-methoxy-cyclohexanecarboxylic acid (2-methyl-quinolin-8-yl)-amide 1-Hydroxy-*t*-4-[(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-ylmethyl)-amino]-*r*-cyclohexanecarboxylic acid (6-cyano-quinolin-4-yl)-amide t-4-[(2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amino]-1-hydroxy-*r*-cyclohexanecarboxylic acid (3-methoxy-quinoxalin-5-yl)-amide *t*-4-[(2,3-Dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)amino]-1-hydroxy-*N*-(3-methyl-5-quinoxalinyl)-*r*-cyclohexanecarboxamide
or a pharmaceutically acceptable derivative thereof.

10. A method of treatment of bacterial infections in mammals, particularly in man, which method comprises the administration to a mammal in need of such treatment an effective amount of a compound according to claim 1.

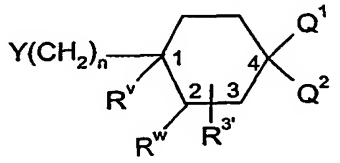
11. The use of a compound according to claim 1, in the manufacture of a medicament for use in the treatment of bacterial infections in mammals.

12. A pharmaceutical composition comprising a compound according to claim 1, and a pharmaceutically acceptable carrier.

13. A process for preparing a compound according to claim 1, which process comprises reacting a compound of formula (IV) with a compound of formula (V):



(IV)



(V)

wherein n is as defined in formula (I); $Z^{1'}$, $Z^{2'}$, $Z^{3'}R^{1'}$ and $R^{3'}$ are Z^1, Z^2, Z^3, R^1 and R^3 as defined in formula (I) or groups convertible thereto; Z^4, Z^5, R^V and R^W are as defined in formula (I);

Q^1 is $NR^{2'}R^{4'}$ or a group convertible thereto wherein $R^{2'}$ and $R^{4'}$ are R^2 and R^4 as defined in formula (I) or groups convertible thereto and Q^2 is H or $R^{3'}$ or Q^1 and Q^2 together form an optionally protected oxo group;

and X and Y may be the following combinations:

(i) one of X and Y is CO_2R^Y and the other is $CH_2CO_2R^X$;

(ii) X is CHR^6R^7 and Y is $C(=O)R^9$;

(iii) X is $CR^7=PR^z{}_3$ and Y is $C(=O)R^9$;

(iv) X is $C(=O)R^7$ and Y is $CR^9=PR^z{}_3$;

(v) one of Y and X is COW and the other is $NHR^{11'}$, NCO or NR11'COW;

(vi) X is $NHR^{11'}$ and Y is $C(=O)R^8$ or X is $C(=O)R^6$ and Y is $NHR^{11'}$;

(vii) X is $NHR^{11'}$ and Y is CR^8R^9W;

(viii) X is W or OH and Y is CH_2OH;

(ix) X is $NHR^{11'}$ and Y is SO_2W;

(x) one of X and Y is $(CH_2)_p$-W and the other is $(CH_2)_qNHR^{11'}$, $(CH_2)_qOH$, $(CH_2)_qSH$ or $(CH_2)_qSCOR^X$ where p+q=1;

(xi) one of X and Y is OH and the other is $-CH=N_2$;

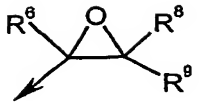
(xii) X is NCO and Y is OH or NH_2;

(xiii) X is $CR^6R^7SO_2W$, A'COW, $CR^6=CH_2$ or oxirane and Y is $NHR^{2'}$;

(xiv) Xis W and Y is $CONHR^{11}$ or $OCONH_2$

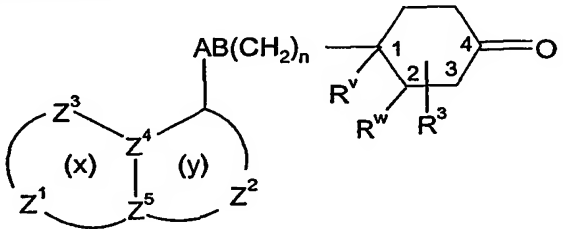
(xv) X is W and Y is -C≡CH followed by hydrogenation of the intermediate –C≡C- group;

in which W is a leaving group, e.g. halo, methanesulphonyloxy, trifluoromethanesulphonyloxy or imidazolyl; R^X and R^Y are (C_{1-6})alkyl; R^Z is aryl or (C_{1-6})alkyl; A' and $NR^{11'}$ are A and NR^{11} as defined in formula (I), or groups convertible thereto; and oxirane is:



wherein R^6, R^8 and R^9 are as defined in formula (I);
and thereafter optionally or as necessary converting Q^1 and Q^2 to $NR^{2'}R^{4'}$; converting A', $Z^{1'}$, $Z^{2'}$, $Z^{3'}$, $R^{1'}$, $R^{2'}$, $R^{3'}$, $R^{4'}$ and $NR^{11'}$ to A, Z^1, Z^2, Z^3, R^1, R^2, R^3, R^4 and $NR^{11'}$;
converting A-B to other A-B, interconverting R^V, R^W, R^1, R^2, R^3 and/or R^4, and/or forming a pharmaceutically acceptable derivative thereof.

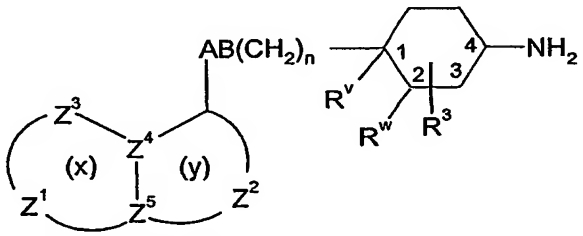
14. A compound of formula (VI):



(VI)

wherein the variables are as described for formula (I).

15. A compound of formula (VII):



wherein the variables are as described for formula (I).